## Patent Screen

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>CL001305, SEQ ID NO:2, March 3, 2004
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FastAlertP Blast Report:
BLASTP 2.2.5 [Nov-16-2002]
Reference: Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schaffer,
Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997),
"Gapped BLAST and PSI-BLAST: a new generation of protein database search
programs", Nucleic Acids Res. 25:3389-3402.
Query= CL001305, SEQ ID NO:2, March 3, 2004
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Score = 8 Identities	ength = 422 342 bits (2174), Expect = 0.0	
Score = 8 Identities Query: 27	<pre>dength = 422 342 bits (2174), Expect = 0.0 3 = 420/424 (99%), Positives = 420/424 (99%), Gaps = 3/424 (09%) MAPPCRFVLELPDCTLAHFALGADAPGDADAPDPRLAALLGPPERSYSLCVPVTPDAGCG</pre>	86
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Sbjct: 359 LQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQTVLSLIQNS 418

## LQTVLSLIQNSFSEP Sbjct: 183 LQTVLSLIQNSFSEP 197

/altid=Derwent | WO2003102159.1114 /def=/PT="New NOVX polypeptides and nucleic acid molecules useful for preventing or treating NOVX-associated disorders, e.g. cancer, cardiomyopathy, atherosclerosis or diabetes, in chromosome mapping, tissue typing or in pharmacogenomics" /QU="DPT" /PA="CURAGEN CORP" /PD="11-DEC-2003" /PR="04-JUN-2002" /ED="25-DEC-2003" Length = 200 Score = 382 bits (981), Expect = e-106 Identities = 193/195 (98%), Positives = 194/195 (99%), Gaps = 1/195 (0%) Query: 256 AIEGLDATG-KTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIV 314 +IEGLDATG KTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIV SIEGLDATGGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIV 62 Sbjct: 3 Query: 315 ASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILL 374 ASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILL Sbjct: 63 ASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILL 122 Query: 375 LTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKV 434  $\verb|LTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKV|$ Sbjct: 123 LTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKV 182 Query: 435 LQTVLSLIQNSFSEP 449 LOTVLSLIONSFSEP Sbjct: 183 LQTVLSLIQNSFSEP 197 Database: FastAlert\_P.fasta Posted date: Mar 2, 2004 5:57 AM Number of letters in database: 37,667,424 Number of sequences in database: 221,820 Lambda K Н 0.321 0.138 Gapped Lambda K 0.0410 0.267 0.140 Matrix: BLOSUM62 Gap Penalties: Existence: 11, Extension: 1 Number of Hits to DB: 39,731,498 Number of Sequences: 221820 Number of extensions: 1943285 Number of successful extensions: 4818 Number of sequences better than 1.0e-08: 5 Number of HSP's better than 0.0 without gapping: 5 Number of HSP's successfully gapped in prelim test: 0 Number of HSP's that attempted gapping in prelim test: 4808 Number of HSP's gapped (non-prelim): 6 length of query: 449 length of database: 37,667,424 effective HSP length: 106 effective length of query: 343

effective length of database: 14,154,504

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effective search space used: 4854994872
T: 11
A: 40
X1: 16 (7.4 bits)
X2: 38 (14.6 bits)
X3: 64 (24.7 bits)
S1: 41 (21.8 bits)
S2: 141 (58.9 bits)
GENESEQP Blast Report:
BLASTP 2.2.5 [Nov-16-2002]
Reference: Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schaffer,
Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997),
"Gapped BLAST and PSI-BLAST: a new generation of protein database search
programs", Nucleic Acids Res. 25:3389-3402.
Query= CL001305, SEQ ID NO:2, March 3, 2004
         (449 letters)
Database: geneseqp all.fasta
           1,546,707 sequences; 273,213,384 total letters
                                                                 Score
Sequences producing significant alignments:
                                                                  (bits) Value
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                                                                            0.0
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                                                                            0.0
CRA 222000011464779 /dataset=GENESEQP /org=Homo sapiens /taxon=9...
                                                                            0.0
CRA 224000047885450 /dataset=GENESEQP /org=Homo sapiens /taxon=9...
                                                                      842
                                                                            0.0
CRA 98000043611837 /dataset=GENESEQP /org=Mus musculus /taxon=10...
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                                                                            e-171
CRA 224000047885452 /dataset=GENESEQP /org=Homo sapiens /taxon=9...
                                                                      455
                                                                            e-127
CRA 223000060714134 /dataset=GENESEQP /org=Homo sapiens /taxon=9...
                                                                      441
                                                                            e-123
CRA 114000021936825 /dataset=GENESEQP /org=Mus musculus /taxon=1...
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CRA 224000046444908 /dataset=GENESEQP /org=Mus musculus /taxon=1...
                                                                            3e-50
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           /mol type=aa /date=18-DEC-03 /length=449
           /altid=derwent_ac|ADC63370 /altid=derwent_id|ADC63370
           /def=Human novel kinase protein /patent=US2003087294-A1
           /pat section=Claim
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 Score = 914 bits (2362), Expect = 0.0
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Query: 1
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           MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP
Sbjct: 1
           MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP 60
Query: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
           RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP
Sbjct: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
Query: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ 180
           GGOAGGAOOGFLLRDPLDDPDTROALLELLGACOEAPRPHLGEFEADPRGOLWORLWEVO
Sbjct: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACOEAPRPHLGEFEADPRGOLWORLWEVO 180
Query: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
           DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSF1PEARAVLDLV
Sbjct: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
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effective search space: 4854994872

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Query: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300
           DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT
Sbjct: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300
Query: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
           IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLOHLPPAHHPVY
Sbjct: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
Query: 361 OWPEDLLKPDLILLLTVSPEERLORLQGRGMEKTREEAELEANSVFROKVEMSYORMENP 420
           QWPEDLLKPDL1LLLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP
Sbjct: 361 QWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420
Query: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449
           GCHVVDASPSREKVLQTVLSLIQNSFSEP
Sbjct: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449
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           /mol type=aa /date=10-JUN-03 /length=449
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           /def=Novel human thymidylate kinase subfamily kinase
           /patent=US6489153-B1 /pat_section=Claim
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 Score = 914 bits (2362), Expect = 0.0
 Identities = 449/449 (100%), Positives = 449/449 (100%)
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Query: 1
           MAFARRILRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP
Sbjct: 1
          MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP 60
Query: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
           RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHORLLHOLRRGPFORCOLLRLLCYCP
Sbjct: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
Query: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ 180
           GGOAGGAOOGFLLRDPLDDPDTROALLELLGACOEAPRPHLGEFEADPRGOLWORLWEVO
Sbjct: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ 180
Query: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
           DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV
Sbjct: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
Query: 241 DOCPKQIOKGKFQVVAIEGLDATGKTTVTOSVADSLKAVLLKSPPSCIGOWRKIFDDEPT 300
           DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT
Sbjct: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300
Query: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
           I IRRAFYSLGNYI VASEI AKESAKSPVI VDRYWHSTATYAI ATEVSGGLOHLPPAHHPVY
Sbict: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
Query: 361 QWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420
           QWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP
Sbjct: 361 QWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420
Query: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449
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Sbjct: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449
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Length = 449
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          MAFARRLLRGPLSGPLLGRRGVCAGAMAPP RFVLELPDCTLAHFALGADAPGDADAPDP
Sbjct: 1
          MAFARRLLRGPLSGPLLGRRGVCAGAMAPPRRFVLELPDCTLAHFALGADAPGDADAPDP 60
Query: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
          RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP
Sbjct: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120
Query: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVO 180
           GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ
Sbjct: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWORLWEVO 180
Query: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
           DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSF1PEARAVLDLV
Sbjct: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240
Query: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300
           DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGOWRKIFDDEPT
Sbjct: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300
Query: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
           IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLOHLPPAHHPVY
Sbjct: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360
Query: 361 QWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420
           QWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP
Sbjct: 361 QWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420
Query: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449
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         Length = 422
Score = 842 bits (2174), Expect = 0.0
Identities = 420/424 (99%), Positives = 420/424 (99%), Gaps = 3/424 (0%)
Query: 27 MAPPCRFVLELPDCTLAHFALGADAPGDADAPDPRLAALLGPPERSYSLCVPVTPDAGCG 86
          MAPP RFVLELPDCTLAHFALGADAPGDADAPDPRLAALLGPPERSYSLCVPVTPDAGCG
Sbjct: 1
          MAPPRRFVLELPDCTLAHFALGADAPGDADAPDPRLAALLGPPERSYSLCVPVTPDAGCG 60
Query: 87 ARVRAARLHQLLHQLRRGPFQRCQLLRLLCYCPGGQAGGAQQGFLLRDPLDDPDTRQAL 146
          ARVRAARLHORLLHOLRRGPFORCOLLRLLCYCPGGOAGGAOOGFLLRDPLDDPDTROAL
Sbjct: 61 ARVRAARLHORLLHOLRRGPFORCOLLRLLCYCPGGOAGGAOOGFLLRDPLDDPDTROAL 120
Query: 147 LELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQDGRRLQVGCAQVVPVPEPPLHPVVPD 206
           LELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQDGRRLQVGCAQVVPVPEPPLHPVVPD
Sbjct: 121 LELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQDGRRLQVGCAQVVPVPEPPLHPVVPD 180
Query: 207 LPSSVVFPDREAARAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDAT-GK 265
```

LPSSVVFPDREAARAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDAT GK Sbjct: 181 LPSSVVFPDREAARAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGGK 240 Query: 266 TTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKS 325 TTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKS Sbjct: 241 TTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKS 300 Query: 326 PVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQR 385 PVIVDR HSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQR Sbjct: 301 PVIVDR--HSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQR 358 Query: 386 LQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQTVLSLIQNS 445 LQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQTVLSLIQNS Sbjct: 359 LOGRGMEKTREEAELEANSVFROKVEMSYORMENPGCHVVDASPSREKVLOTVLSLIONS 418 Query: 446 FSEP 449 **FSEP** Sbjct: 419 FSEP 422 >CRA|98000043611837 /dataset=GENESEQP /org=Mus musculus /taxon=10090 /mol type=aa /date=04-DEC-03 /length=395 /altid=derwent\_ac|AAE38614 /altid=derwent\_id|AAE38614 /def=Mouse thymidylate kinase protein /patent=WO2003064642-A1 /pat\_section=Disclosure; Length = 395Score = 602 bits (1552), Expect = e-171 Identities = 294/378 (77%), Positives = 330/378 (87%) Query: 68 PPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCPGGQAGGA 127 P + LCVP+ P GCG RV+AAR+H RLL QLRRGP QRCQL +LL Y PG QAG A Sbjct: 16 PQGAATRLCVPLAPGEGCGPRVQAARVHHRLLQQLRRGPLQRCQLSKLLGYGPGDQAGEA 75 Query: 128 QOGFLLRDPLDDPDTROALLELLGACOEAPRPHLGEFEADPRGOLWORLWEVODGRRLOV 187 Q GFLLRDP D PDTR+ LL+LLG+CQEA RP L EF+AD +G LWQRLWE+Q R++QV Sbjct: 76 QHGFLLRDPCDHPDTRRDLLQLLGSCQEAARPQLAEFQADSQGLLWQRLWELQGDRQVQV 135 Query: 188 GCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLVDQCPKQI 247 CA V+P EP LHP++PDL +S VF DR+AARAVLEECTSFIPEARAVLDLVDQCPK++ Sbjct: 136 DCACVLPAQEPHLHPLLPDLLNSAVFQDRDAARAVLEECTSFIPEARAVLDLVDQCPKEV 195 Query: 248 QKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFY 307 QKGKFQV+AIEGLDATGKTT+TQSV++SLKAVLL+SPP CI QWRKIFDDEPTIIRRAFY Sbjct: 196 QKGKFQVIAIEGLDATGKTTLTQSVSESLKAVLLQSPPPCISQWRKIFDDEPTIIRRAFY 255 Query: 308 SLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLL 367 SLGNY+VASEIAKES PVIVDRYWHSTATYAIATEVSGGLQ+LPPAHHPVYQWP DLL Sbjct: 256 SLGNYLVASEIAKESTNFPVIVDRYWHSTATYAIATEVSGGLQYLPPAHHPVYQWPGDLL 315 Query: 368 KPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDA 427 KPDL+LLLTV+ EER++RLQGRG EKT+EEAELEAN+VFRQKVEM+YQRMENP CH+VDA Sbjct: 316 KPDLVLLLTVNSEERVRRLQGRGQEKTKEEAELEANNVFRQKVEMTYQRMENPSCHLVDA 375 Query: 428 SPSREKVLQTVLSLIQNS 445 SPSRE VLQ VL LIQ+S Sbjct: 376 SPSRETVLQKVLELIQSS 393 >CRA|224000047885452 /dataset=GENESEQP /org=Homo sapiens /taxon=9606 /mol type=aa /date=18-DEC-03 /length=251 /altid=derwent ac | ADC39138 /altid=derwent id | ADC39138 /def=Novel human NOVX polypeptide SEQ ID NO: 80

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Score = 455 bits (1171), Expect = e-127
Identities = 229/232 (98%), Positives = 229/232 (98%)
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          A AVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQS ADSLK
Sbjct: 20
          ALGAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSAADSLK 79
Query: 278 AVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTA 337
          AVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTA
          AVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTA 139
Query: 338 TYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREE 397
           TYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREE
Sbjct: 140 TYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREE 199
Query: 398 AELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQTVLSLIQNSFSEP 449
           AELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLOTVLSLIQNSFSEP
Sbjct: 200 AELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQTVLSLIQNSFSEP 251
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           /def=Novel human secreted and transmembrane protein
           SeqID 646 /patent=WO2003072035-A2 /pat section=Claim
         Length = 290
Score = 441 bits (1133), Expect = e-123
Identities = 229/252 (90%), Positives = 232/252 (92%), Gaps = 4/252 (1%)
Query: 202 PVVPDLPS-SVVFPDREAARAVLEECTSF---IPEARAVLDLVDQCPKQIQKGKFQVVAI 257
           P+ LPS V +R R CT + IPEARAVLDLVDQCPKQIQKGKFQVVAI
Sbjct: 39 PIWATLPSWRVSKRERAIPRRGKSLCTVYLLYIPEARAVLDLVDQCPKQIQKGKFQVVAI 98
Query: 258 EGLDATGKTTVTOSVADSLKAVLLKSPPSCIGOWRKIFDDEPTIIRRAFYSLGNYIVASE 317
           EGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTI1RRAFYSLGNYIVASE
          EGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASE 158
Query: 318 IAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTV 377
           IAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTV
Sbjct: 159 IAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTV 218
Query: 378 SPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQT 437
           SPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENPGCHVVDASPSREKVLQT
Sbjct: 219 SPEERLORLOGRGMEKTREEAELEANSVFROKVEMSYORMENPGCHVVDASPSREKVLOT 278
Query: 438 VLSLIQNSFSEP 449
          VLSLIQNSFSEP
Sbjct: 279 VLSLIQNSFSEP 290
```

Score = 259 bits (663), Expect = 2e-68 Identities = 133/192 (69%), Positives = 152/192 (79%), Gaps = 9/192 (4%)

Query: 225 ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP 284 +CTSFIPEARAVLDLVDQCPK++QKGKFQV+AIEGLDATGKTT+TO Sbjct: 157 QCTSFIPEARAVLDLVDQCPKEVQKGKFQVIAIEGLDATGKTTLTQHFKSLSRLSSYSRH 216 Query: 285 PSCIGQWRKIFDDEPTIIR-----RAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY 339 P CI K +++ ++ F NY+VASEIAKES PVIVDRYWHSTATY Sbjct: 217 PPCI----KPVEEDLLMMNLLSFEEPFILWANYLVASEIAKESTNFPVIVDRYWHSTATY 272 Query: 340 AIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAE 399 AIATEVSGGLQ+LPPAHHPVYQWP DLLKPDL+LLLTV+ EER++RLQGRG EKT+EEAE Sbjct: 273 AIATEVSGGLQYLPPAHHPVYQWPGDLLKPDLVLLLTVNSEERVRRLQGRGQEKTKEEAE 332 Query: 400 LEANSVFRQKVE 411 LEAN+VFROKVE Sbjct: 333 LEANNVFRQKVE 344 >CRA|224000046444908 /dataset=GENESEQP /org=Mus musculus /taxon=10090 /mol\_type=aa /date=18-DEC-03 /length=508 /altid=derwent ac ADC63372 /altid=derwent id ADC63372 /def=Mouse thymidylate kinase /patent=US2003087294-A1 /pat section=Disclosure; Length = 508Score = 199 bits (506), Expect = 3e-50Identities = 96/120 (80%), Positives = 104/120 (86%) Query: 220 RAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAV 279 ++CTSFIPEARAVLDLVDQCPK++QKGKFQV+AIEGLDATGKTT+TQ Sbjct: 97 KTTTQQCTSFIPEARAVLDLVDQCPKEVQKGKFQVIAIEGLDATGKTTLTQHFKSLSRLS 156 Query: 280 LLKSPPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY 339 PSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY Sbjct: 157 SYSRHPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY 216 Score = 178 bits (452), Expect = 5e-44 Identities = 88/100 (88%), Positives = 89/100 (89%) Query: 306 FYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPED 365 NY+VASEIAKES PVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPED Sbjct: 269 FILWANYLVASEIAKESTNFPVIVDRYWHSTATYAIATEVSGGLOHLPPAHHPVYOWPED 328 Query: 366 LLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSV 405 LLKPDLILLTVSPEERLQRLQGRGMEKTREEAE A V Sbjct: 329 LLKPDLILLTVSPEERLQRLQGRGMEKTREEAEAIATEV 368 Score = 132 bits (333), Expect = 3e-30 Identities = 63/73 (86%), Positives = 70/73 (95%) Query: 340 AIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAE 399 AIATEVSGGLQ+LPPAHHPVYQWP DLLKPDL+LLLTV+ EER++RLQGRG EKT+EEAE Sbjct: 414 AIATEVSGGLQYLPPAHHPVYOWPGDLLKPDLVLLLTVNSEERVRRLOGRGOEKTKEEAE 473 Query: 400 LEANSVFROKVEM 412

LEANSVFRQKVE+

Sbjct: 474 LEANSVFRQKVEL 486

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Score = 120 bits (300), Expect = 2e-26
Identities = 64/73 (87%), Positives = 66/73 (90%), Gaps = 1/73 (1%)
Query: 225 ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP 284
          ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP
Sbjct: 1
          ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP 60
Query: 285 -PSCIGQWRKIFD 296
            SI+R+D
Sbjct: 61 CTSFIPEARAVLD 73
  Database: geneseqp all.fasta
   Posted date: Feb 27, 2004 4:29 PM
  Number of letters in database: 273,213,384
  Number of sequences in database: 1,546,707
Lambda
           K
   0.321
           0.138
                     0.426
Gapped
Lambda
           K
   0.267
          0.0410
                    0.140
Matrix: BLOSUM62
Gap Penalties: Existence: 11, Extension: 1
Number of Hits to DB: 273,243,944
Number of Sequences: 1546707
Number of extensions: 12474211
Number of successful extensions: 32890
Number of sequences better than 1.0e-08: 9
Number of HSP's better than 0.0 without gapping: 9
Number of HSP's successfully gapped in prelim test: 0
Number of HSP's that attempted gapping in prelim test: 32867
Number of HSP's gapped (non-prelim): 17
length of query: 449
length of database: 273,213,384
effective HSP length: 119
effective length of query: 330
effective length of database: 89,155,251
effective search space: 29421232830
effective search space used: 29421232830
T: 11
A: 40
X1: 16 ( 7.4 bits)
X2: 38 (14.6 bits)
X3: 64 (24.7 bits)
S1: 41 (21.8 bits)
S2: 148 (61.6 bits)
NCBI pataa Blast Report:
BLASTP 2.2.5 [Nov-16-2002]
Reference: Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schaffer,
Jinghui Zhanq, Zhenq Zhanq, Webb Miller, and David J. Lipman (1997),
"Gapped BLAST and PSI-BLAST: a new generation of protein database search
programs", Nucleic Acids Res. 25:3389-3402.
Query= CL001305, SEQ ID NO:2, March 3, 2004
```

(449 letters)

Database: pataa.fasta 143,807 sequences; 24,539,066 total letters Score (bits) Value Sequences producing significant alignments: CRA|224000047562998 /altid=gi|27309063 /def=gb|AA000504.1| Seque... 914 CRA 224000047566517 /altid=gi 27309064 /def=gb AA000505.1 | Seque... 199 3e-51 >CRA|224000047562998 /altid=gi|27309063 /def=qb|AA000504.1| Sequence 2 from patent US 6489153 /org= /taxon= /div= /dataset=pataa /length=449 Length = 449Score = 914 bits (2362), Expect = 0.0 Identities = 449/449 (100%), Positives = 449/449 (100%) Query: 1 MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP 60 MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP Sbjct: 1 MAFARRLLRGPLSGPLLGRRGVCAGAMAPPCRFVLELPDCTLAHFALGADAPGDADAPDP 60 Query: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLLHQLRRGPFQRCQLLRLLCYCP 120 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLHQLRRGPFQRCQLLRLLCYCP Sbjct: 61 RLAALLGPPERSYSLCVPVTPDAGCGARVRAARLHQRLHQLRRGPFQRCQLLRLLCYCP 120 Query: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ 180 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ Sbjct: 121 GGQAGGAQQGFLLRDPLDDPDTRQALLELLGACQEAPRPHLGEFEADPRGQLWQRLWEVQ 180 Query: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV Sbjct: 181 DGRRLQVGCAQVVPVPEPPLHPVVPDLPSSVVFPDREAARAVLEECTSFIPEARAVLDLV 240 Query: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT Sbjct: 241 DQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSPPSCIGQWRKIFDDEPT 300 Query: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLOHLPPAHHPVY Sbjct: 301 IIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVY 360 Query: 361 QWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP 420 QWPEDLLKPDLILLTVSPEERLQRLQGRGMEKTREEAELEANSVFRQKVEMSYQRMENP Sbjct: 361 QWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSVFROKVEMSYORMENP 420 Query: 421 GCHVVDASPSREKVLOTVLSLIONSFSEP 449 GCHVVDASPSREKVLQTVLSLIQNSFSEP Sbjct: 421 GCHVVDASPSREKVLQTVLSLIQNSFSEP 449

Score = 199 bits (506), Expect = 3e-51
Identities = 96/120 (80%), Positives = 104/120 (86%)

Query: 220 RAVLEECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAV 279
+ ++CTSFIPEARAVLDLVDQCPK++QKGKFQV+AIEGLDATGKTT+TQ +
Sbjct: 97 KTTTQQCTSFIPEARAVLDLVDQCPKEVQKGKFQVIAIEGLDATGKTTLTQHFKSLSRLS 156
Query: 280 LLKSPPSCIGOWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY 339

## PSCIGOWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY

Sbjct: 157 SYSRHPSCIGQWRKIFDDEPTIIRRAFYSLGNYIVASEIAKESAKSPVIVDRYWHSTATY 216

Score = 178 bits (452), Expect = 5e-45 Identities = 88/100 (88%), Positives = 89/100 (89%)

Ouery: 306 FYSLGNYIVASEIAKESAKSPVIVDRYWHSTATYAIATEVSGGLOHLPPAHHPVYOWPED 365

NY+VASEIAKES PVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPED

Sbjct: 269 FILWANYLVASEIAKESTNFPVIVDRYWHSTATYAIATEVSGGLQHLPPAHHPVYQWPED 328

Query: 366 LLKPDLILLLTVSPEERLQRLQGRGMEKTREEAELEANSV 405 LLKPDLILLTVSPEERLQRLQGRGMEKTREEAE A V Sbjct: 329 LLKPDLILLLTVSPEERLQRLQGRGMEKTREEAEAIATEV 368

Score = 132 bits (333), Expect = 3e-31 Identities = 63/73 (86%), Positives = 70/73 (95%)

Query: 340 AIATEVSGGLQHLPPAHHPVYQWPEDLLKPDLILLLTVSPEERLQRLQGRGMEKTREEAE 399

AIATEVSGGLQ+LPPAHHPVYQWP DLLKPDL+LLLTV+ EER++RLQGRG EKT+EEAE

Sbjct: 414 AIATEVSGGLQYLPPAHHPVYQWPGDLLKPDLVLLLTVNSEERVRRLQGRGQEKTKEEAE 473

Query: 400 LEANSVFRQKVEM 412 LEANSVFRQKVE+

Sbjct: 474 LEANSVFRQKVEL 486

Score = 120 bits (300), Expect = 2e-27 Identities = 64/73 (87%), Positives = 66/73 (90%), Gaps = 1/73 (1%)

Query: 225 ECTSF1PEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP 284

ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP

ECTSFIPEARAVLDLVDQCPKQIQKGKFQVVAIEGLDATGKTTVTQSVADSLKAVLLKSP 60 Sbjct: 1

Query: 285 -PSCIGQWRKIFD 296 SI+R+D

Sbjct: 61 CTSFIPEARAVLD 73

Database: pataa.fasta

Posted date: Nov 30, 2003 1:29 AM Number of letters in database: 24,539,066 Number of sequences in database: 143,807

Lambda

0.138 0.321 0.426

Gapped

Lambda

0.267 0.0410 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Hits to DB: 23,728,226 Number of Sequences: 143807 Number of extensions: 1055474

Number of successful extensions: 2885 Number of sequences better than 1.0e-08: 2

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Number of HSP's better than 0.0 without gapping: 2
Number of HSP's successfully gapped in prelim test: 0
Number of HSP's that attempted gapping in prelim test: 2873
Number of HSP's gapped (non-prelim): 9 length of query: 449
length of database: 24,539,066
effective HSP length: 103
effective length of query: 346
effective length of database: 9,726,945
effective search space: 3365522970
effective search space used: 3365522970
T: 11
A: 40
X1: 16 ( 7.4 bits)
X2: 38 (14.6 bits)
X3: 64 (24.7 bits)
S1: 41 (21.8 bits)
S2: 140 (58.5 bits)
```